

IN THE SPECIFICATION:

Please amend the specification as follows:

Please amend paragraph [0101] as follows:

[0101] A source program 331 shown in FIG. 20(a) is the same as the source program 321 shown in FIG. 19(a) except for the loop count. Therefore, as is the case with the source program 321, the element size of the array A is four bytes and the element size of the array B is two bytes. As shown in FIG. 20(b), the loop of the source program 321 is structurally transformed into a double loop, and the peeling processing is performed on a remainder left over after the loop count 140 was divided by 64 which is the number of elements of the array B stored in one line. As a result, a program [[322]] 332 is obtained. When the copy-type optimizing processing is performed, as explained with reference to FIGs. 19(c) and (d), the innermost loop of the double loop is divided into three and the prefetch instructions are inserted. Accordingly, a program 333 shown in FIG. 20(c) is obtained. When the condition-type optimizing processing is performed, as explained with reference to FIGs. 19(e) and (f), the loop count and prefetch instructions are controlled according to the conditional branch expressions (FIG. 20(d), 334). As a result, a program 335 shown in FIG. 20(e) is eventually obtained.

Please amend paragraph [0124] as follows:

[0124] Thus, as shown by a program 402 in FIG. 27(b), the number of misaligned elements n of the array A is derived according to the expression (3). Next, the loop processing is performed for the misaligned elements 432 (A[0] to A[n-1]) of the array A in accordance with the number of elements n. After this, for the aligned elements 433 (from the element A[n] onward) of the array A, the transformation into a double loop is performed as in the case of the simple loop splitting explained with reference to FIG. 11.